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Mr. Gray was for many years an Honorary Member of the Institute of Actuaries, and a Fellow of the Royal Microscopical Society.

He was elected a Fellow of this Society 1847, March 12.

Richard Ladd was born at Wandsworth on November 5, 1848, and was educated at Dr. Semple's school at St. Margaret's, near Dover. He subsequently selected a seafaring life, and at the time of his death was navigating officer of the cable steamship *Nimia*.

Extremely fond of astronomy and meteorology, he devoted most of his leisure to their study, and with the instruments lent him by the Meteorological Society he made many useful and excellent observations. He had always looked forward to the time when he could devote all his power and energy to astronomy, but this hope was frustrated by his untimely death on May 3, 1887.

He was elected a Fellow of this Society November 9, 1883.

William Garrow Lettsom was born at Fulham in March, 1805. He was educated at Westminster School, and during his earlier years lived much with his grandfather, Sir William Garrow. He was originally intended for the legal profession, but his inclinations were for the diplomatic service, which he entered in 1831. He was well acquainted with Cruikshank, Thackeray, and other celebrated artistic and literary men of that time, and was a contributor to various periodicals, among others to the *Omnibus*, for which he wrote under the signature of "Dr. Bulgardo."

After serving as Attaché to the British Legations at Berlin, Munich, Washington, Turin and Madrid, he was appointed Secretary to the Legation at Mexico, where he shortly afterwards became Chargé d'Affaires. While in Mexico the British Government suspended diplomatic relations with that country for a time, owing to Mr. Lettsom's representations, and he was the object of an attempted assassination. On the satisfactory termination of the dispute he was presented with a testimonial by the English residents. In 1859 he was appointed Consul-General and Chargé d'Affaires to the Republic of Uruguay, and remained at Monte Video till 1869, when he retired from the diplomatic service.

Mr. Lettsom is perhaps best known as the joint author of Gregg and Lettsom's *Manual of the Mineralogy of Great Britain and Ireland*, which was the most complete and accurate work that had appeared relating especially to the mineralogy of the British Isles. He was much interested in spectroscopic studies, and was in correspondence with the most eminent workers in this field of research. He was the author of several papers on geological, electrical, and spectroscopic subjects; but in all branches of natural philosophy he took great interest, and his

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assistance and suggestions were ever ready for the scientific inquirer.

He died of acute bronchitis on December 14, 1887.

He was elected a Fellow of this Society April 13, 1849.

Alfred Morris was born at Warrington in 1837. A few years after his birth his father removed to London, where the son received his education. On arriving at manhood he visited most of the Australian colonies, as well as Tasmania and New Zealand, and finally settled at Sydney, New South Wales, where he entered the Government service as a civil engineer. He was employed upon the reservoirs for the new water supply, and in laying out some of the new railways, in the course of which work he surveyed a large portion of the New South Wales territory. He was subsequently appointed to the Public Works Department of Western Australia, and while engaged in laying out a new system of roads in this colony he overworked himself in a very hot season, and incurred an illness which terminated fatally on February 28, 1887.

He was a Fellow of the Geological Society of London, and was much thought of as a lecturer on geological and astronomical subjects, as he had the gift of imparting to others the knowledge he himself possessed.

He was elected a Fellow of the Society January 13, 1882.

Balfour Stewart was born on November 1, 1828. He went to school at Dundee, but entered St. Andrew's University at the age of thirteen, and thence passed on to Edinburgh, where he studied under Professor Forbes. Leaving college when he was eighteen years old he was sent by his parents to serve his apprenticeship in business with a firm at Leith, and went out to Australia with a cousin, James Balfour, to start on a commercial career. But he was never fond of business, and soon returned home to Edinburgh, where he became assistant to Professor Forbes in 1853. In 1859 he was appointed Director of Kew Observatory, and held this post until 1870, when he was appointed Professor of Physics at the Owens College, Manchester. He died of apoplexy on December 18, 1887, at Ballymagarvey, near Drogheda, whither he had gone to spend the Christmas holidays.

Balfour Stewart's name was first prominently brought before the public by his researches on radiant heat. His paper was presented to the Royal Society of Edinburgh, and read on March 10, 1858. It contains an account of experiments and arguments on the necessary relationship between the radiation and absorption of a substance. The whole science of spectrum analysis is founded on that relationship, and Stewart deserves a prominent place in the history of this branch of physics.

It is almost impossible now to realise the unsatisfactory and vague ideas which pervaded nearly all writings on the radiation

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